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Title Application of LMS Algorithms in Adaptive Array Processing:
Performance Study

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Abstract

Performance of the various forms of LMS algorithms, viz., Structured LMS, Improved LMS and Recursive LMS have been studied and compared in this report. Simulations have been carried out for a uniform equi-spaced linear array (ULA) illuminated by desired signal, uncorrelated interfering signals and white Gaussian noise. The computed values for these forms of LMS algorithm have been compared with that of Recursive Least Square (RLS) algorithm for various input conditions. The computed results are validated against those in literature. The effect of various parameters like the step-size, the power level of desired signal and the interfering signals on the performance of the algorithms has been analyzed